WHAT IS CLAIMED IS:

1. A photoelectric conversion device comprising:

photoelectric conversion means including a photoelectric conversion element constructed by a plurality of pixels on a semiconductor substrate; and

storage means for storing predetermined control information arranged on the same semiconductor substrate.

2. The device according to claim 1, further comprising control means for controlling charge accumulation of said photoelectric conversion means on the basis of the control information stored in said storage means.

3. The device according to claim 1, wherein said photoelectric conversion means further includes monitor means for monitoring an accumulated charge state in said photoelectric conversion element, and

said control means includes selection means for selecting an arbitrary one of a plurality of pieces of status information on the basis of the control information stored in said storage means, and comparison means for comparing an output from said monitor means with the status information selected by said selection means, and controls the charge accumulation of said photoelectric conversion means on the basis of a comparison result of said comparison means.

4. A photoelectric conversion device comprising:

photoelectric conversion means including a

photoelectric conversion element constructed by a plurality of pixels, and storage means for storing predetermined control information;

read means for amplifying an accumulated charge signal of said photoelectric conversion element with a predetermined amplification factor, and reading out the amplified signal; and

control means for controlling the amplification factor of said read means on the basis of the control information stored in said storage means.

5. The device according to claim 4, wherein said photoelectric conversion means further includes monitor means for monitoring an accumulated charge state in said photoelectric conversion element, and

said control means includes selection means for selecting an arbitrary one of a plurality of pieces of status information on the basis of the control information stored in said storage means, and comparison means for comparing an output from said monitor means with the status information selected by said selection means, and controls the amplification factor of said read means on the basis of a comparison result of said comparison means.

6. The device according to claim 1, further comprising a plurality of photoelectric conversion means equivalent to said photoelectric conversion means.

7. The device according to claim 3, wherein said monitor means monitors and outputs information based on a maximum accumulated charge amount of said photoelectric conversion element.

8. The device according to claim 3, wherein said control means stores the status information selected by said selection means in said storage means as the control information.

9. The device according to claim 1, wherein said photoelectric conversion means is constructed by forming said photoelectric conversion element and storage means on a single substrate.

10. The device according to claim 1, wherein said control means includes determination means for determining predetermined information on the basis of said output from said monitor means, and stores the information determined by said determination means in said storage means as the control information.

11. The device according to claim 3, wherein said control means includes determination means for determining predetermined information on the basis of said output from said monitor means, and stores the information determined by said determination means in said storage means as the control information.

12. A method of controlling charge accumulation of a photoelectric conversion element constructed by a

plurality of pixels, comprising:

the control step of reading out control information from a memory corresponding to said photoelectric conversion element, and controlling the charge accumulation of said photoelectric conversion element on the basis of the control information.

13. The method according to claim 12, wherein the control step includes:

the monitor output step of monitoring and outputting an accumulated charge state in said photoelectric conversion element;

the selection step of selecting an arbitrary one of a plurality of pieces of status information on the basis of the control information read out from said memory;

the comparison step of comparing an output in the monitor output step with the status information selected in the selection step; and

the accumulation control step of controlling the charge accumulation of said photoelectric conversion element on the basis of a comparison result in the comparison step.

14. The method according to claim 12, wherein the control step includes the step of controlling charge accumulation operations of a plurality of photoelectric conversion means equivalent to said photoelectric conversion means on the basis of control information in

a plurality of memories equivalent to said memory.

15. A method of controlling operation for reading out an accumulated charge signal from a photoelectric conversion element constructed by a plurality of pixels while applying the signal with a predetermined amplification factor, comprising:

the control step of reading out control information from a memory corresponding to said photoelectric conversion element, and controlling the amplification factor on the basis of the control information.

16. The method according to claim 15, wherein the control step includes:

the monitor output step of monitoring and outputting an accumulated charge state in said photoelectric conversion element;

the selection step of selecting an arbitrary one of a plurality of pieces of status information on the basis of the control information read out from said memory;

the comparison step of comparing an output in the monitor output step with the status information selected in the selection step; and

the amplification factor control step of controlling the amplification factor on the basis of a comparison result in the comparison step.

17. The method according to claim 15, wherein the control step includes the step of controlling the

amplification factors of accumulated charge signals read out from a plurality of photoelectric conversion means equivalent to said photoelectric conversion means on the basis of control information in a plurality of memories equivalent to said memory.

18. The method according to claim 13, wherein the monitor output step includes the step of monitoring and outputting information based on a maximum accumulated charge amount of said photoelectric conversion element.

19. The method according to claim 13, wherein the control step includes the step of storing the status information selected in the selection step in said memory as the control information.

20. The method according to claim 12, wherein the control step includes the determination step of determining predetermined information on the basis of an accumulated charge signal read out from said photoelectric conversion element, and the storage step of storing the information determined in the determination step in said memory as the control information.

21. A focus detection device including a photoelectric conversion device of claim 1.

22. A storage medium which computer-readably stores the processing steps of a control method of claim 12.

23. A photoelectric conversion device comprising:

a plurality of photoelectric conversion elements, which are divided into a plurality of regions;

accumulation start means for making said photoelectric conversion elements in the plurality of regions start accumulation;

monitoring means for monitoring and outputting accumulation states of the photoelectric conversion elements in the respective regions in turn;

determination means for comparing each of the monitor outputs output in turn with a predetermined value to determine if the accumulation of the photoelectric conversion element in the region corresponding to the monitor output is to end; and

accumulation end means for, when said determination means determines that the accumulation is to end, ending the accumulation of the photoelectric conversion element in the region corresponding to the monitor output,

wherein said monitoring means monitors and outputs the accumulation states in the respective regions at a predetermined time interval in turn, and makes the predetermined time interval different between a timing immediately after the beginning of the accumulation and a timing a certain period of time after the beginning of the accumulation.

24. The device according to claim 23, wherein a plurality of photoelectric conversion elements

equivalent to said photoelectric conversion elements are located in each of the plurality of regions.

25. The device according to claim 23, wherein said plurality of photoelectric conversion elements construct an area sensor having a continuous, two-dimensional distribution.

26. The device according to claim 23, wherein the monitor output corresponds to a signal based on a maximum accumulated charge amount of the photoelectric conversion elements included in each region.

27. The device according to claim 23, wherein said monitoring means makes the predetermined time interval different by inserting a wait time at a timing of the monitor output.

28. The device according to claim 23, wherein said monitoring means makes the predetermined time interval different by changing a clock signal for controlling a timing of the monitor output.

29. A focus detection device comprising:

a plurality of photoelectric conversion elements, which are divided into a plurality of regions;

accumulation start means for making said photoelectric conversion elements in the plurality of regions start accumulation;

monitoring means for monitoring and outputting accumulation states of the photoelectric conversion

elements in the respective regions in turn;

determination means for comparing each of the monitor outputs output in turn with a predetermined value to determine if the accumulation of the photoelectric conversion element in the region corresponding to the monitor output is to end;

accumulation end means for, when said determination means determines that the accumulation is to end, ending the accumulation of the photoelectric conversion element in the region corresponding to the monitor output;

pixel read means for reading out pixels of the respective divided regions; and

detection means for performing focus detection of an object by calculating pixel signals read out by said pixel read means,

wherein said monitoring means monitors and outputs the accumulation states in the respective regions at a predetermined time interval in turn, and makes the predetermined time interval different between a timing immediately after the beginning of the accumulation and a timing a certain period of time after the beginning of the accumulation.

30. The device according to claim 29, wherein a plurality of photoelectric conversion elements equivalent to said photoelectric conversion elements are located in each of the plurality of regions.

31. The device according to claim 29, wherein said plurality of photoelectric conversion elements construct an area sensor having a continuous, two-dimensional distribution.

32. The device according to claim 29, wherein the monitor output corresponds to a signal based on a maximum accumulated charge amount of the photoelectric conversion elements included in each region.

33. The device according to claim 29, wherein said monitoring means makes the predetermined time interval different by inserting a wait time at a timing of the monitor output.

34. The device according to claim 29, wherein said monitoring means makes the predetermined time interval different by changing a clock signal for controlling a timing of the monitor output.

35. A method of controlling a photoelectric conversion device which comprises a plurality of photoelectric conversion elements, which are divided into a plurality of regions, accumulation start means for making said photoelectric conversion elements in the plurality of regions start accumulation, monitoring means for monitoring and outputting accumulation states of the photoelectric conversion elements in the respective regions in turn, determination means for comparing each of the monitor outputs output in turn with a

predetermined value to determine if the accumulation of the photoelectric conversion element in the region corresponding to the monitor output is to end, and accumulation end means for, when said determination means determines that the accumulation is to end, ending the accumulation of the photoelectric conversion element in the region corresponding to the monitor output,

wherein said monitoring means monitors and outputs the accumulation states in the respective regions at a predetermined time interval in turn, and makes the predetermined time interval different between a timing immediately after the beginning of the accumulation and a timing a certain period of time after the beginning of the accumulation.

36. The method according to claim 35, wherein a plurality of photoelectric conversion elements equivalent to said photoelectric conversion elements are located in each of the plurality of regions.

37. The method according to claim 35, wherein said plurality of photoelectric conversion elements construct an area sensor having a continuous, two-dimensional distribution.

38. The method according to claim 35, wherein the monitor output corresponds to a signal based on a maximum accumulated charge amount of the photoelectric conversion elements included in each region.

39. The method according to claim 35, wherein said monitoring means makes the predetermined time interval different by inserting a wait time at a timing of the monitor output.

40. The method according to claim 35, wherein said monitoring means makes the predetermined time interval different by changing a clock signal for controlling a timing of the monitor output.

41. A method of controlling a focus detection device which comprises a plurality of photoelectric conversion elements, which are divided into a plurality of regions, accumulation start means for making said photoelectric conversion elements in the plurality of regions start accumulation, monitoring means for monitoring and outputting accumulation states of the photoelectric conversion elements in the respective regions in turn, determination means for comparing each of the monitor outputs output in turn with a predetermined value to determine if the accumulation of the photoelectric conversion element in the region corresponding to the monitor output is to end, accumulation end means for, when said determination means determines that the accumulation is to end, ending the accumulation of the photoelectric conversion element in the region corresponding to the monitor output, pixel read means for reading out pixels of the respective divided regions,

and detection means for performing focus detection of an object by calculating pixel signals read out by said pixel read means,

wherein said monitoring means monitors and outputs the accumulation states in the respective regions at a predetermined time interval in turn, and makes the predetermined time interval different between a timing immediately after the beginning of the accumulation and a timing a certain period of time after the beginning of the accumulation.

42. The method according to claim 41, wherein a plurality of photoelectric conversion elements equivalent to said photoelectric conversion elements are located in each of the plurality of regions.

43. The method according to claim 41, wherein said plurality of photoelectric conversion elements construct an area sensor having a continuous, two-dimensional distribution.

44. The method according to claim 41, wherein the monitor output corresponds to a signal based on a maximum accumulated charge amount of the photoelectric conversion elements included in each region.

45. The method according to claim 41, wherein said monitoring means makes the predetermined time interval different by inserting a wait time at a timing of the monitor output.

46. The method according to claim 41, wherein said monitoring means makes the predetermined time interval different by changing a clock signal for controlling a timing of the monitor output.

47. A storage medium that stores a control program for controlling a photoelectric conversion device which comprises a plurality of photoelectric conversion elements, which are divided into a plurality of regions, accumulation start means for making said photoelectric conversion elements in the plurality of regions start accumulation, monitoring means for monitoring and outputting accumulation states of the photoelectric conversion elements in the respective regions in turn, determination means for comparing each of the monitor outputs output in turn with a predetermined value to determine if the accumulation of the photoelectric conversion element in the region corresponding to the monitor output is to end, and accumulation end means for, when said determination means determines that the accumulation is to end, ending the accumulation of the photoelectric conversion element in the region corresponding to the monitor output, said control program having:

a code of the step of controlling said monitoring means to monitor and output the accumulation states in the respective regions at a predetermined time interval

in turn, and to make the predetermined time interval different between a timing immediately after the beginning of the accumulation and a timing a certain period of time after the beginning of the accumulation.

48. The medium according to claim 47, wherein a plurality of photoelectric conversion elements equivalent to said photoelectric conversion elements are located in each of the plurality of regions.

49. The medium according to claim 47, wherein said plurality of photoelectric conversion elements construct an area sensor having a continuous, two-dimensional distribution.

50. The medium according to claim 47, wherein the monitor output corresponds to a signal based on a maximum accumulated charge amount of the photoelectric conversion elements included in each region.

51. The medium according to claim 47, wherein said monitoring means makes the predetermined time interval different by inserting a wait time at a timing of the monitor output.

52. The medium according to claim 47, wherein said monitoring means makes the predetermined time interval different by changing a clock signal for controlling a timing of the monitor output.

53. A storage medium that stores a control program for controlling a focus detection device which comprises a

plurality of photoelectric conversion elements, which are divided into a plurality of regions, accumulation start means for making said photoelectric conversion elements in the plurality of regions start accumulation, monitoring means for monitoring and outputting accumulation states of the photoelectric conversion elements in the respective regions in turn, determination means for comparing each of the monitor outputs output in turn with a predetermined value to determine if the accumulation of the photoelectric conversion element in the region corresponding to the monitor output is to end, accumulation end means for, when said determination means determines that the accumulation is to end, ending the accumulation of the photoelectric conversion element in the region corresponding to the monitor output, pixel read means for reading out pixels of the respective divided regions, and detection means for performing focus detection of an object by calculating pixel signals read out by said pixel read means, said control program having:

a code of the step of controlling said monitoring means to monitor and output the accumulation states in the respective regions at a predetermined time interval in turn, and to make the predetermined time interval different between a timing immediately after the beginning of the accumulation and a timing a certain

period of time after the beginning of the accumulation.

54. The medium according to claim 53, wherein a plurality of photoelectric conversion elements equivalent to said photoelectric conversion elements are located in each of the plurality of regions.

55. The medium according to claim 53, wherein said plurality of photoelectric conversion elements construct an area sensor having a continuous, two-dimensional distribution.

56. The medium according to claim 53, wherein the monitor output corresponds to a signal based on a maximum accumulated charge amount of the photoelectric conversion elements included in each region.

57. The medium according to claim 53, wherein said monitoring means makes the predetermined time interval different by inserting a wait time at a timing of the monitor output.

58. The medium according to claim 53, wherein said monitoring means makes the predetermined time interval different by changing a clock signal for controlling a timing of the monitor output.